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Ceratomyces hyalinus, a new species from China

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Abstract — *Ceratomyces hyalinus* on *Hydrochus annamita* (*Hydrochidae*, *Coleoptera*) is described and illustrated as a new species. The type of this species is deposited in Guangdong Institute of Microbiology Macrofungi Herbarium (GDGM), Guangzhou, China.

Key words —*Ascomycetes*, *Laboulbeniales*, taxonomy

Introduction

Ceratomyces Thaxt. is a small genus of *Laboulbeniales* with only recognized 20 species (Tavares 1985, Santamaría 1999). Among them, 18 have been described as occurring on *Tropisternus* (*Hydrophilidae*, *Coleoptera*) from America (Tavares 1985), one on *Sternolophus* (*Hydrophilidae*) from southeast Asia (Tavares 1985), and another on *Hydrobius* (*Hydrophilidae*) from Europe (Santamaría 1999). The genus is characterized by a receptacle of usually 3–4 cells, outer wall cells flattened in alternate vertical rows, other 2 rows with subequal or conspicuously longer and narrower cells, rows usually appearing 3 across, wall cell tiers usually 20 or more (rarely as few as 13), and a perithecium with a slender subterminal or terminal horn (usually multicellular) on only one side (Tavares 1985). In this paper, a new species of *Ceratomyces* is described, and *Hydrochus* is reported as the first member of *Hydrochidae* parasitized by *Ceratomyces*.

Materials and methods

All insect specimens were examined by a binocular dissecting microscope. The thalli were first removed from the insect bodies using a watchmaker's (Juan & Chien 1997) or acupuncture needle and then mounted on a slide.

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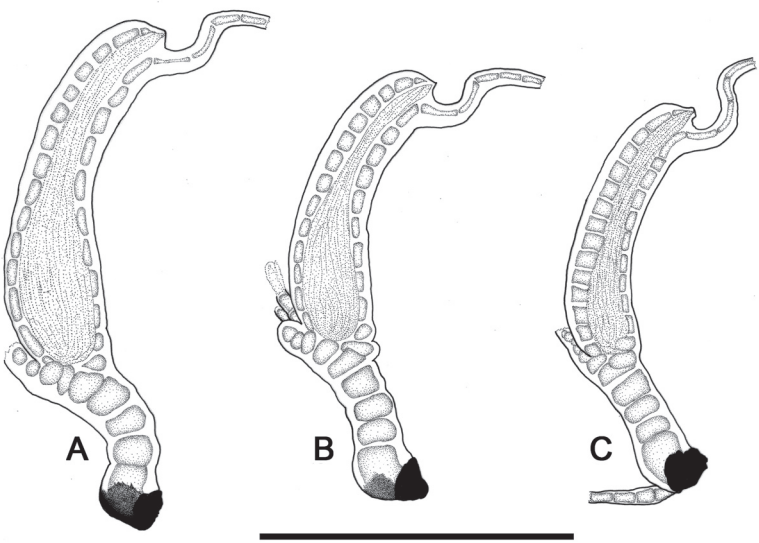

Fig 1. Mature thalli of *Ceratomyces hyalinus*. Bar = 100 μm.
A. GDGM 60879-3a (Holotype);
B. GDGM 60879-3b (Isotype); C. GDGM 60879-3c (Isotype).

The fungus slides were prepared following the method described by Benjamin (1971) and Huldén (1983). Permanent slides are deposited in the Herbarium of Microbiology Institute of Guangdong Province (GDGM).

Taxonomy

Ceratomyces hyalinus Y.H. Shen, **sp. nov.** Fig. 1.

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Thallus hyalinus, 137–175 μm longus. Receptaculum ex 4–5 cellulis superpositis constans, curvatum antrorsum, cellulae basilaris parte inferna opaca, longitudo latitudinem paene aequans, cellulis ceteris fere dimidio longioribus quam latioribus. Perithecium 83–107 μm longum, 18–37 μm latum, ad apicem attenuatum, postice curvatum, processum subsigmoideum subterminaliter ac postice ferens. Appendix brevis ex 3–4 cellulis superpositis constans, ad apicem attenuata.

Holotype: China, Hainan Province, Guangdong province, Nankunshan Provincial Nature Reserve, on the abdomen of *Hydrochus annamita* Régimbart, 13 Jul 1987, Ya-Heng Shen, GDGM 60879-3a. (Isotypes: GDGM 60879-3b; GDGM 60879-3c).

Etymology: From Latin *hyalinus* = glassy, without any color.

Thallus hyaline, 119–157 μm and 137–175 μm long from base of foot to tip of the perithecium and to its perithecial apex respectively. Receptacle 41–62

× 14–24 μm, consisting of 4–5 flattened cells, usually bending slightly forward; basal cell usually black in lower part, with the length sub-equal to the breadth and the length of the remaining cells of the receptacle is about half of the width. Perithecium 83–107 × 18–37 μm, strongly curved towards the ventral side in the upper half and gradually narrowing towards the tip; with about 15 flattened cells in ventral row of perithecial wall, and about 10 cells in dorsal row of perithecial wall; with a slender, shorter, sigmoid, multicellular perithecial appendage formed by the distal cell, 32–45 × 3–11 μm, consisting of about 4–5 cells, which commonly diverges at an angle of 45 degrees or more. Appendage 21–30 × 8–16 μm, short, consisting of about 3–4 flattened cells, gradually tapering towards the tip, usually bearing short lateral branches at the apex.

Remark: The diagnostic features of *Ceratomyces hyalinus* are its hyaline thallus except for the basal cell of the receptacle, the perithecial wall cells consisting of about 10–15 flattened cells only, the receptacle with 4–5 flattened cells, and the simple perithecial appendage.

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